Tsuruhara teaches an alternating current generator for a vehicle having a cooling function constructed in such a manner that a parts housing chamber is isolated from peripheral and rear cooling chambers so as not to accommodate fluid within the parts housing chamber (Abstract). Tsuruhara, therefore, discloses a parts housing chamber for receiving electrical generating parts including a generator shaft, a stator and a rotor (col. 3, lines 12-14) that is separate from a hermetically sealed peripheral cooling chamber (col. 4, lines 59-60 and Fig. 1). The Office Action recognizes that Tsuruhara "does not teach the cooling passage formed such that said stator coil comes into contact with a cooling liquid." The Office Action, rather, relies on Kikuchi as teaching this feature.

Kikuchi is the U.S. equivalent of JP 2001-145302, which is discussed at page 1, line 15 - page 2, line 17, under Background Art of this application. Kikuchi teaches a motor/generator with equalized coolant distribution in which a stator is provided with a plurality of slots opening toward an outer periphery of the rotor with cooling liquid chambers formed at either end such that cooling liquid can be made to flow through the slots (Abstract). Kikuchi, however, suffers shortfalls enumerated in the above-identified passages of this application.

The Office Action asserts that it would have been obvious to combine the teachings of Tsuruhara and Kikuchi in a manner that resulted in a combination of all of the features of at least independent claim 1. Specifically, the Office Action states that given the teachings of these references "[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to modify the motor of Tsuruhara in view of the cooling passages as taught by Kikuchi because it makes it possible for the slots to form liquid thereby cooling the coils accommodated therein" (citing Kikuchi at col. 1, lines 19-22 and 48-50).

Applicants respectfully submit that Tsuruhara and Kikuchi are not combinable in the manner proposed in the Office Action. Specifically, Tsuruhara teaches that the structure of a

prior art generator shown in Fig. 5 of that patent is complicated in that the cooling chamber 106 is formed to be isolated from the parts housing chamber 105 by three separate parts, i.e., a front bracket 102, a rear bracket 103 and a cylindrical enclosure 104, while the second cooling chamber 129 is formed outside the generator case 101 by two parts - the rear bracket 103 and the cooling cover 128 (col. 2, lines 58-67). With reference to Fig. 1 of Tsuruhara, the Tsuruhara device is intended to simplify the Fig. 5 cooling chamber configuration while maintaining segregation between (a) the parts housing chamber for receiving electrical generating parts and (b) a peripheral cooling chamber and a rear cooling chamber (see, e.g., col. 3, lines 6-20 and the Abstract).

MPEP §2143.01 provides that a proposed modification cannot change the principle of operation of a reference. Specifically, "if the proposed modification or a combination of the prior art would change the principle of operation of the prior art invention being modified then the teachings of the references are not sufficient to render the claims *prima facie* obvious." In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). In Ratti, the Court reversed the rejection of the pending claim holding that the "suggested combination of references would require substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.

Given the teachings of Tsuruhara, where the goal is to maintain segregation between the cooling chambers and the parts housing chamber for receiving electrical generating parts, one of ordinary skill in the art would not have been motivated to apply the teachings of Kikuchi in a manner that resulted in the subject matter recited in the pending claims. There is nothing, in fact, in Tsuruhara to suggest any motivation to maintain the parts housing chamber in any manner other than "isolated from the peripheral and rear cooling chambers so as not to accommodate the fluid." Just as in Ratti, the suggested combination of references

(Tsuruhara and Kikuchi) would require a substantial reconstruction and redesign of the elements shown in Tsuruhara as well as a change in the basic principle under which the Tsuruhara construction was designed to operate, rendering this an impermissible combination of references.

Additionally, Applicants note that the Office Action's alleged motivation to combine these references (i.e., "because it makes it possible for the slots to form liquid thereby cooling the coils") is inadequate in light of the above discussion.

Kimura is relied on by the Office Action, at page 4, only for teaching a motor that has distributed windings. As such, Kimura does not overcome the shortfalls in attempting to combine Tsuruhara and Kikuchi in order to find all of the features recited in at least claim 1 to have been at least suggested by the combination of those references.

For at least these reasons, Applicants respectfully submit that the combination of Tsuruhara and Kikuchi cannot reasonably be read to have suggested the combination of all of the features recited in at least independent claim 1. In fact, Tsuruhara, in its disclosure that the parts housing chamber is isolated from the peripheral and rear cooling chambers so as not to accommodate the fluid, teaches away from a cooling passage formed such that a stator coil comes in contact with a cooling liquid as recited in claim 1. Further, claims 2-14 also would not have been rendered obvious by the various combinations of the applied references for at least the respective dependence of these claims directly and indirectly on independent claim 1, as well as for the separately patentable subject matter which each of theses claims recites.

Applicants' representative presented these arguments to Examiners Preston and Mullins during the June 14 personal interview. The Examiners agreed that Applicants' arguments were reasonable, and the Examiners did not rebut any of these arguments. Examiner Mullins recognized that the Tsuruhara reference teaches away from the subject matter recited in the claims.

Accordingly, reconsideration and withdrawal of the rejections of claims 1-14 under 35 U.S.C. §103(a) as being unpatentable over the combinations of the applied references are respectfully requested.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-14 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

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JAO:DAT/fpw

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